



MEMORANDUM

Date: May 3, 2013
To: Jason Graf, Crandall Arambula
From: Ariel Davis and Kendra Breiland, Fehr & Peers
Subject: **Yakima Downtown Master Plan – Existing Conditions Findings**

SE13-0293

This memorandum includes our findings regarding the existing conditions of the transportation system in Downtown Yakima.

SUMMARY OF FINDINGS

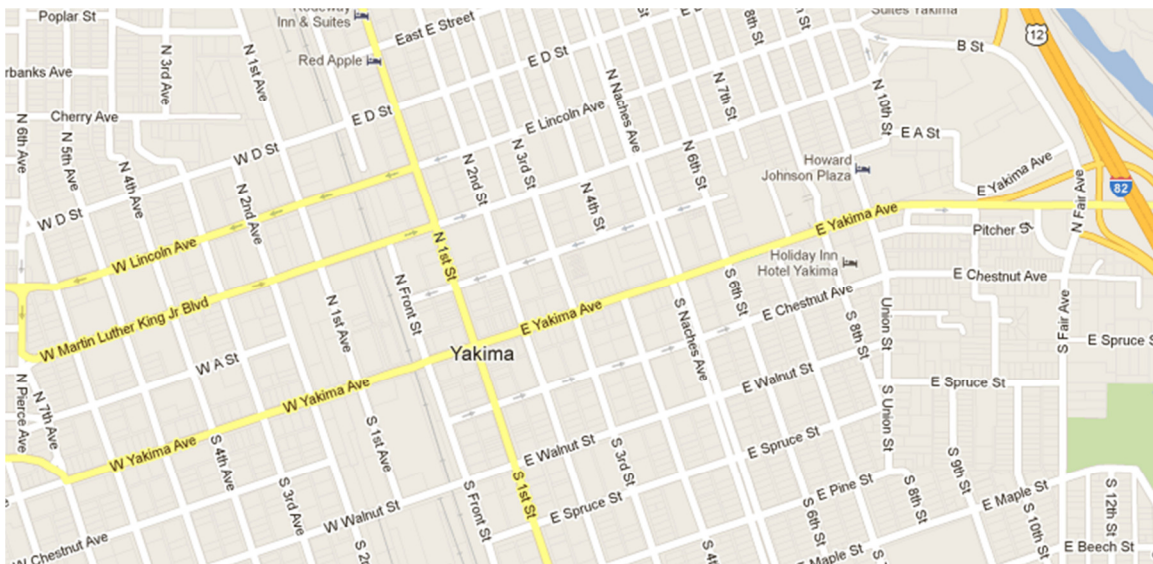
The findings of the existing conditions assessment are briefly summarized here. A more detailed discussion follows.

- **Roadway System:** There is relatively little congestion within the study area today. All study segments meet the City's level of service standard. The railroad grade separation on Lincoln Avenue provides a convenient alternative to Yakima Avenue for westbound traffic; a similar project is underway on Martin Luther King Jr. Boulevard for eastbound traffic.
- **Pedestrian Facilities:** Pedestrian facilities vary throughout the study area with good facilities within the central retail core. However, adequate sidewalks are lacking in some of the industrial areas to the west.
- **Bicycle Facilities:** No dedicated bicycle facilities are present within the study area. However, bicycle lanes and sharrows are provided on the Lincoln Avenue/Martin Luther King Jr. couplet to the north.
- **Transit:** Downtown is served by ten Yakima Transit bus routes and a transit center. In addition, Yakima Valley Trolleys operates a historic trolley system seasonally that serves a more recreational purpose.
- **Parking:** A parking occupancy survey on a Friday and Saturday indicated that parking supply is abundant within downtown. Although some blocks were at full capacity within the central retail core, parking was always available on an adjacent block.



STUDY AREA

Downtown Yakima is anchored by Yakima Avenue, a principal arterial which runs in a generally east-west direction. The roadway is two lanes in each direction with left turn pockets at each intersection. Parking lanes eight feet in width are provided on both sides of the road, resulting in a cross-section of seven lanes totaling approximately 66 feet. Crossings are marked at most intersections and some intersections have bulb-outs to reduce the pedestrian crossing distance. All intersections are signalized with the exception of 7th Street and 9th Street. At the east end of the study area, Yakima Avenue has an interchange with I-82, one of four interchanges providing access to the City. Yakima Avenue carries more than 21,000 vehicles per day on its busiest stretch. The speed limit is 25 miles per hour (mph) throughout the study area.



The study area runs along 16 blocks from 7th Avenue to 9th Street, and extends one block north and south of Yakima Avenue to A Street and Chestnut Street. Between Front Street and Sixth Street, A Street is one-way westbound and Chestnut Street is one-way eastbound. The north-south running BNSF railroad bisects the study area just west of Front Street. Approximately nine trains per day pass along the tracks at up to 35 mph. The crossing has gates, flashers, and bells at Yakima Avenue.



North of the study area, Martin Luther King Jr. Boulevard and Lincoln Avenue form a one-way couplet. An underpass of the BNSF railroad is currently under construction on Martin Luther King Jr. Boulevard and an underpass has already been completed on Lincoln Avenue. The one-way couplet provides convenient access from I-82 to points west.



Looking westbound along Yakima Avenue near the 3rd Street intersection

ROADWAY SYSTEM

The City of Yakima periodically counts the average daily traffic (ADT) on local roadways. The Yakima Urban Area Transportation Plan Update 2025 uses street segment volume-to-capacity ratios to quantify roadway level of service (LOS). The analysis time period is the PM peak hour, which is the busiest hour of travel within the City. The Plan suggests an hourly capacity of 1,000 vehicles per lane. The City defines LOS using the thresholds shown in Table 1. The City sets its LOS standard at LOS D, which equates to a v/c ratio of 0.89 or less. For example, a two-lane street would need a volume of no more than 1,780 vehicles per hour to achieve the LOS standard.

TABLE 1. STREET SEGMENT LEVEL OF SERVICE THRESHOLDS

Level of Service	Volume-to-Capacity Ratio (v/c)
A	Less than 0.60
B	0.60 to 0.69
C	0.70 to 0.79
D	0.80 to 0.89
E	0.90 to 1.0
F	Greater than 1.0

Source: Yakima Urban Area Transportation Plan Update 2025.



Using this methodology, volume-to-capacity ratios were calculated using the most recently available ADT, factored to reflect the PM peak hour. As shown in Table 2 on the following page, all study segments operate at LOS A.

In addition to the study segments shown above, v/c ratios were calculated for Lincoln Avenue and Martin Luther King Jr. Boulevard. The couplet operates at LOS A with v/c ratios lower than those on Yakima Avenue. Although the street segment level of service reflects LOS A conditions, the frequent traffic signals along Yakima Avenue result in more congestion. Field observations suggest LOS B or C may be more reflective of operations along Yakima Avenue due to the control delay caused by the signals.

Much of the Yakima Avenue vehicle traffic is regional in nature, carrying traffic headed for the highway or areas to the east. Lincoln Avenue provides a more convenient alternative for westbound through traffic due to the lower volumes, fewer traffic signals, and fewer conflicting traffic movements. Although Martin Luther King Jr. Boulevard is currently closed for construction of the railroad underpass, it will provide the same benefit for eastbound through traffic when completed.



TABLE 2. VOLUME-TO-CAPACITY RATIOS ON STUDY SEGMENTS

Street Segment	PM Peak Hour Volume	v/c Ratio	LOS
Yakima Avenue from 7th Avenue to 5th Avenue	1,440	0.36	A
Yakima Avenue from 5th Avenue to 3rd Avenue	1,550	0.39	A
Yakima Avenue from 3rd Avenue to 1st Street	1,710	0.43	A
Yakima Avenue from 1st Street to 3rd Street	1,470	0.37	A
Yakima Avenue from 3rd Street to 6th Street	1,520	0.38	A
Yakima Avenue from 6th Street to 8th Street	1,860	0.47	A
5th Avenue from MLK Jr. Blvd to Yakima Avenue	620	0.16	A
5th Avenue from Yakima Avenue to Walnut Street	1,050	0.26	A
3rd Avenue from Lincoln Avenue to Yakima Avenue	430	0.11	A
3rd Avenue from Yakima Avenue to Walnut Street	620	0.16	A
1st Street from MLK Jr. Boulevard to Yakima Avenue	1,710	0.43	A
1st Street from Yakima Avenue to Walnut Street	1,440	0.36	A
3rd Street from MLK Jr. Boulevard to Yakima Avenue	300	0.15	A
3rd Street from Yakima Avenue to Walnut Street	300	0.08	A
6th Street from MLK Jr. Boulevard to Yakima Avenue	700	0.35	A
6th Street from Yakima Avenue to Walnut Street	650	0.33	A
8th Street from MLK Jr. Boulevard to Yakima Avenue	520	0.26	A
8th Street from Yakima Avenue to Walnut Street	470	0.24	A

Note: PM peak hour volume is calculated by applying the 0.087 factor identified in the Yakima Urban Area Transportation Plan Update 2025 to the ADT counts provided by the City.

Source: City of Yakima traffic counts and Fehr & Peers, 2013.

Future Growth

The Comprehensive Plan includes a population growth projection of 10 percent by the year 2025. If that population growth is extrapolated to vehicle traffic, the volume-to-capacity ratio along Yakima Avenue would continue to fall within the LOS A category, indicating that the capacity provided on Yakima Avenue is sufficient to serve traffic through 2025 and beyond.



PEDESTRIAN & BICYCLE FACILITIES

The sidewalk network is continuous within the study area east of Front Street. The central portion of downtown, between Front Street and Naches Avenue, has recently constructed pedestrian amenities such as bulb-outs, which minimize the distance pedestrians must travel to cross the street. Mid-block crossings are provided on some north-south cross streets. The cross streets in the eastern part of the



Mid-block crossing on North 3rd Street

study area provide a pleasant atmosphere for pedestrians in general. However, due to the heavy traffic volumes and width of the roadway, crossing Yakima Avenue is more hostile. Sidewalks are provided along Yakima Avenue throughout the study area. However, sidewalks are lacking on some nearby streets on the west side of the study area which includes many industrial uses. In some areas, sidewalks are provided, but may not have ADA-compliant facilities.

No dedicated facilities are provided for bicycles within the study area. Chapter 6.75.040 of the municipal code states that bicyclists may not travel on the sidewalks within the central business district. Along Yakima Avenue, cyclists must share the travel lane with vehicles. As shown in the photo to the right, cyclists "take the lane" to travel the corridor. Bicycle lanes and sharrows are provided on portions of the Lincoln Avenue/Martin Luther King Jr. Boulevard couplet to the north.



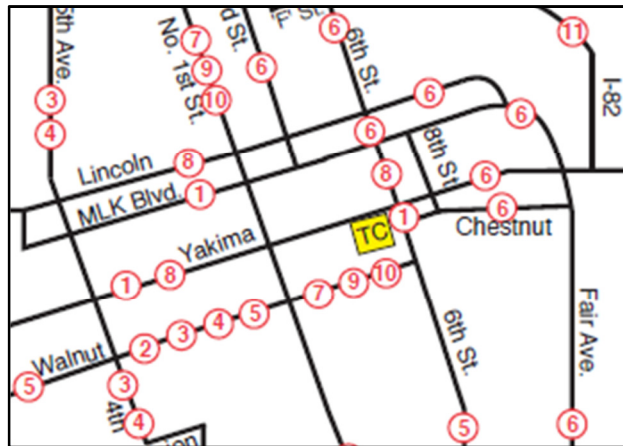
Bicyclists riding westbound on Yakima Avenue



The Washington State Department of Transportation conducted pedestrian and bicycle counts at the intersection of Yakima Avenue and 3rd Street in 2008. Between 7 and 9 AM, 15 bicyclists and 109 pedestrians passed through the intersection. The afternoon peak period included essentially equal bicycle volumes, but much higher pedestrian activity than the morning peak period. Between 4 and 6 PM, 16 bicyclists and 312 pedestrians were recorded passing through the intersection.

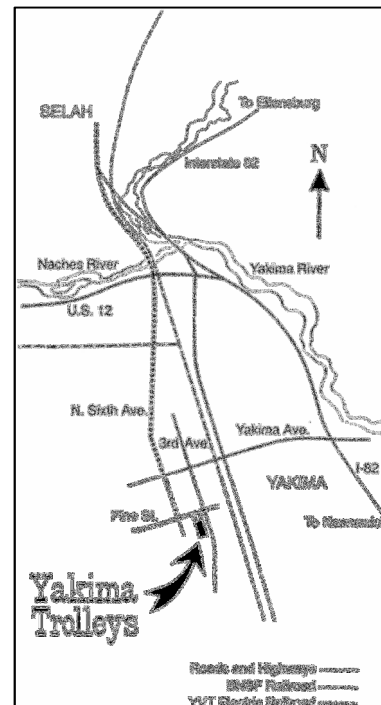
TRANSIT

The study area is well served by local bus routes, operated by Yakima Transit. A transit center is located along the eastern side of Fourth Street between Chestnut St and Walnut Street. All ten of Yakima Transit's routes (shown at right) serve the study influence area, providing good access to downtown from all parts of the City. Most bus stops do not have benches and few have shelters.



Source: Yakima Transit Route Map, Fall 2012.

Yakima Valley Trolleys operates a turn-of-the-century trolley system. The trolley barn is located at the corner of Third Avenue and Pine Street, just south of the study area. Yakima Valley Trolleys maintains tracks along 6th Avenue and Pine Street. The 6th Avenue line, which stretches from Pine Street all the way to downtown Selah is currently closed for repairs. The Pine Street line from 3rd Avenue to 11th Avenue is used for current operations. The trolley operates on weekends during the summer (Memorial Day to Labor Day) as well as for special events or charters. As is shown in the map, the trolley route is outside of the downtown commercial area. The land uses that currently flank the trolley tracks are industrial in nature.



Source: Yakima Valley Trolleys.



PARKING

Parallel parking is available along most of Yakima Avenue. On side streets, both parallel and angle spaces are provided. Parking occupancy was assessed on a Friday between 1 PM and 3 PM and on a Saturday between 11 AM and 1 PM. Table 3 summarizes the observed occupancy by zone.

TABLE 3. PARKING OCCUPANCY

Study Location	Friday 1PM - 3PM		Saturday 11AM - 1PM	
	Total Parked Cars	Occupancy	Total Parked Cars	Occupancy
<i>West of Front Street</i>				
West Yakima Avenue	20	18%	29	26%
West A Street	33	26%	12	9%
West Chestnut Street	38	29%	7	5%
North-South Cross Streets	100	32%	60	19%
Total	191	28%	108	16%
<i>Front Street to Naches Avenue</i>				
East Yakima Avenue	30	35%	32	37%
East A Street	57	53%	40	37%
East Chestnut Street	37	36%	25	24%
North-South Cross Streets	144	58%	133	54%
Total	268	49%	230	42%
<i>East of Naches Avenue</i>				
East Yakima Avenue	12	17%	18	26%
East A Street	15	32%	23	49%
East Chestnut Street	19	22%	8	9%
North-South Cross Streets	42	38%	22	20%
Total	88	28%	71	23%

Note: PM peak hour volume is calculated as 8.7% of ADT per the Yakima Urban Area Transportation Plan Update 2025.
Source: Fehr & Peers, 2013.



Overall, parking utilization during the Friday observation was higher than on Saturday. This held true for both the retail core and the more industrial area. The central zone between Front Street and Naches Avenue had the highest occupancy with 49 percent of the parking supply utilized on Friday and 42 percent of the parking supply utilized on Saturday. The following locations had occupancies over 80 percent during the Friday count period:

- South side of A Street between 2nd Street & 3rd Street
- North side of Yakima Avenue between 4th Street and Naches Avenue
- Both sides of Chestnut Street between 3rd Street & 4th Street
- South side of Chestnut Street between Naches Avenue and 6th Street
- West side of 2nd Street between A Street and Yakima Avenue
- West side of 2nd Street between Yakima Avenue and Chestnut Avenue
- Both sides of 3rd Street between Yakima Avenue and Chestnut Avenue
- West side of Naches Avenue between A Street and Yakima Avenue

Although parking on the busiest blocks reached full utilization, parking was always available on an adjacent block or even the other side of the street. Overall parking occupancy within the western and eastern zones was similar to each other with utilization ranging from 16 to 28 percent.

The current municipal code (Chapter 15.06.040) requires off-street parking minimums based on the type of land use. However, the downtown business district is exempt from all minimum parking requirements with the exception of those related to residential uses. Residential areas are not present within the study area for the most part, but are immediately adjacent within the study influence area. The minimum parking requirements for residential uses range from 1 to 2 spaces per dwelling unit depending on the type of residential development.